The etch(es) employed in the method described above can result in formation of a facet and/or in formation of the sides 62 of a ridge of a waveguide 38. These surfaces are preferably smooth in order to reduce optical losses. Suitable etches for forming these surfaces include, but are not limited to, reactive ion etches, the Bosch process and the methods taught in U.S. Patent application serial number 09/690,959; filed on October 16, 2000; and entitled "Formation of a Smooth Vertical Surface on an Optical Component" which is incorporated herein in its entirety.

IN THE CLAIMS

Please cancel claims 2, 12, 13, 18-20 and 25-37.

Please add new claims 38-54.

Please amend the claims as follows:

1. (Amended) A filter, comprising:

a light distribution component having an output side;

a plurality of array waveguides defined in a light transmitting medium positioned on a base, the array waveguides configured to deliver a light signal into the light distribution component such that the light signal is incident on the output side of the light distribution component;

the light transmitting medium defining at least a portion of a groove, the groove being positioned between adjacent array waveguides such that material in the groove is located over the base and between different regions of the light transmitting medium; and

one or more effective length tuners configured to tune the effective lengths of a plurality of the array waveguides such that the location where the light signal is incident on the output side changes.

2. (Canceled)

3. (Amended) The filter of claim 1, wherein the effective length tuners are configured to change the effective lengths of array waveguides such that the difference in the amount of effective

length change between adjacent array waveguides is the same for different pairs of adjacent array waveguides.

4. (Amended) The filter of claim 3, wherein the amount of the effective length change of an array waveguide is different for each array waveguide adjacent to an effective length tuner.

5. (Amended) The filter of claim 3, further comprising:

electronics for operating the one or more effective length tuners so as to change the effective length such that the amount of the effective length change between adjacent array waveguides is a constant.

A18 cont'd

6. (Amended) The filter of claim 1, wherein each effective length tuner has a different effective area and the effective area for each effective length tuner is not positioned adjacent to the light distribution component, the effective area being the area of the effective length tuner that causes the change in effective length.

7. (Amended) The filter of claim 1, wherein each effective length tuner has an effective area and the difference in the effective area for adjacent array waveguides is a constant, the effective area being the area of the effective length tuner that causes the change in effective length.

8. (Unchanged) The filter of claim 7, wherein the effective area of each effective length tuner is different.

A19

9. (Amended) The filter of claim 1, wherein each effective length tuner has an effective area with a different average length and the difference in the average length for adjacent array waveguides is a constant.

10. (Unchanged) The filter of claim 9, wherein the array waveguides each have a different average length and the difference in the average length of adjacent array waveguides is a constant, the difference in the average length of adjacent array waveguides being less than the average length of the effective area for adjacent array waveguides.

A20

11. (Amended) The filter of claim 1, wherein the length of an effective area of each effective length tuner is different for each array waveguides and the difference in the length for adjacent array waveguides is a constant.

12-13. (Canceled)

14. (Amended) The filter of claim 1, further including electrical conductors to provide electrical communication between at least two effective length tuners.

15. (Amended) The filter of claim 1, wherein the effective length tuners are temperature control devices.

A21

16. (Amended) The filter of claim 1, wherein each effective length tuner includes a plurality of electrical contacts.

17. (Amended) The filter of claim 1, wherein each array waveguide is at least in part defined by a ridge and at least a portion of each effective length tuner is positioned over a ridge.

18-20. (Canceled)

21. (Amended) A filter, comprising:

a light distribution component having an output side;

a plurality of array waveguides configured to deliver a light signal into the light distribution component such that the light signal is incident on the output side of the light distribution component; and

A22

a temperature control device positioned over a plurality of the array waveguides so as to change the effective length of a plurality of the array waveguides such that the location where the light signal is incident on the output side of the light distribution component changes.

A2e cont'd

22. (Amended) The filter of claim 21, wherein the temperature control device has a wedge shape.

23-37. (Canceled)

Please add the following new claims 38-54:

38. (Added) A filter, comprising:

a light distribution component having an output side;

a plurality of array waveguides configured to deliver a light signal into the light distribution component such that the light signal is incident on the output side of the light distribution component; and

a common effective length tuner configured to change the effective length of a plurality of the array waveguides such that the location where the light signal is incident on the output side of the light distribution component changes, the effective length tuner including a first electrical contact positioned over a plurality of the array waveguides and a second electrical contact positioned under a plurality of the array waveguides.

A23

39. (Added) The filter of claim 38, wherein the array waveguides are defined in a light transmitting medium positioned on a base and the first electrical contact extends over a portion of the light transmitting medium positioned between adjacent array waveguides.

40. (Added) The filter of claim 38, wherein the first electrical contact extends over a portion of the filter positioned between adjacent array waveguides.

41. (Added) The filter of claim 38, wherein the first electrical contact or the second electrical contact has a wedge shaped.

42. (Added) The filter of claim 38, wherein the first electrical contact and the second electrical contact have a wedge shaped.

43. (Added) The filter of claim 38, wherein at least one side of the first electrical contact has a stair step pattern.

44. (Added) The filter of claim 1, wherein the one or more effective length tuners include a temperature control device positioned over a plurality of the array waveguides.

45. (Added) The filter of claim 1, wherein the one or more effective length tuners includes a first electrical contact positioned over a plurality of the array waveguides and a second electrical contact positioned under a plurality of the array waveguides.

46. (Added) The filter of claim 1, wherein the array waveguides are defined in a light transmitting medium positioned on a base and the interface between the light transmitting medium and the base is substantially flat.

47. (Added) The filter of claim 1, wherein the groove extends through the light transmitting medium and into the base.

A23 cont'd

48. (Added) The filter of claim 1, wherein the groove extends through the light transmitting medium and undercuts the array waveguides adjacent to the groove.

49. (Added) The filter of claim 1, wherein the groove is one of a plurality of grooves positioned between adjacent array waveguides.

50. (Added) The filter of claim 1, wherein the effective length tuners are connected in series.

51. (Added) The filter of claim 21, wherein the array waveguides are defined in a light transmitting medium positioned on a base and the temperature control device extends over a portion of the light transmitting medium positioned between adjacent array waveguides.

52. (Added) The filter of claim 21, wherein the temperature control device extends over a portion of the filter positioned between adjacent array waveguides.